

Total No. of Questions : 10]

SEAT No. :

PD4041

[Total No. of Pages : 2

[6401]-2408

F.E.

ESC-105-COM: FUNDAMENTALS OF PROGRAMMING LANGUAGES
(2024 Credit Pattern) (Semester - I/II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.*
- 2) Figure to the right indicates full marks.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Assume suitable data, if necessary.*

- Q1)** a) List the data types in C and provide one example of each. [3]
b) Define flowchart. Explain the symbols used in a flowchart. [3]
c) List the different C tokens and provide an example for each type. [4]
d) Explain symbolic constant with example. [4]

OR

- Q2)** a) Define the following terms: Constant and Variable. [3]
b) Define the following Storage classes in C: auto, extern and static. [3]
c) Explain the keywords in C programming and give examples of reserved keywords. [4]
d) Create a simple flowchart to depict the steps involved in calculating the area of a rectangle. [4]

- Q3)** a) What is arithmetic operator? Explain with example. [3]
b) List all the logical operators in C and provide an example of each. [3]
c) Explain conditional (ternary) operator (? :) in C. [4]
d) Explain with an example the usage of shorthand assignment operators. [4]

OR

- Q4)** a) What is special operator in C. Explain with an example. [3]
b) List any three bitwise operators in C and provide an example of each. [3]
c) Discuss the increment and decrement operator in C. [4]
d) Explain Operator Precedence in C? [4]

P.T.O.

- Q5)** a) Explain the difference between an if statement and an if-else statement with examples. [4]
b) Create a program that uses a switch statement to perform basic arithmetic operations (addition and subtraction) based on user input. [5]
c) Write a Program in C to print the first 10 even numbers using for loop. [5]

OR

- Q6)** a) Explain the syntax and usage of the goto statement in C with example. [4]
b) Explain break statement in loops with an example. [5]
c) Explain while loop with an example that prints numbers from 1 to 10. [5]

- Q7)** a) Explain how to declare and initialize a one-dimensional array in C, with an example. [4]
b) Compare the strcpy() and strncpy() functions. Give suitable example. [5]
c) Write a program to concatenate two strings using the strcat() function. [5]

OR

- Q8)** a) Explain how to declare and initialize a two-dimensional array in C, with an example. [4]
b) Explain the string functions- strcpy, strlen, strcmp, strncmp, strcat. [5]
c) Write a C Program to Check if a Given String is Palindrome. [5]

- Q9)** a) Explain built-in functions and user-defined functions in C programming. [4]
b) What is structure? Explain C syntax of structure declaration with example. [5]
c) Write a program to declare a structure for an employee with members for name, age and gender. Initialize the structure and print the values. [5]

OR

- Q10)** a) How do we define and call a function in C. [4]
b) How do you access structure members in C? Explain with an example. [5]
c) Write a C program for addition and subtraction of 2 numbers, using function. [5]

